



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

### SZABO-SCANDIC HandelsgmbH

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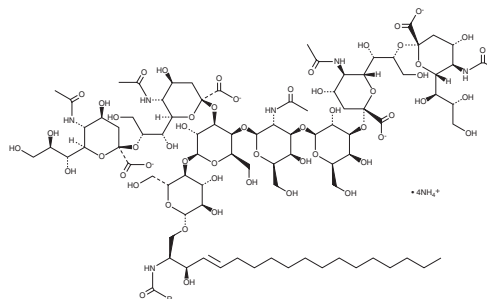
# PRODUCT INFORMATION



## Ganglioside G<sub>Q1b</sub> Mixture (ammonium salt)

Item No. 31561

**CAS Registry No.:** 68652-37-9  
**Formal Name:** ganglioside G<sub>Q1b</sub>, tetraammonium salt  
**MF:** C<sub>106</sub>H<sub>178</sub>N<sub>6</sub>O<sub>55</sub> • 4NH<sub>4</sub> (for stearoyl)  
**FW:** 2,488.7  
**Purity:** ≥98%  
**Supplied as:** A solid  
**Storage:** -20°C  
**Stability:** ≥2 years  
**Special Conditions:** Forms micellar solution in water



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Ganglioside G<sub>Q1b</sub> mixture (ammonium salt) is supplied as a solid. A stock solution may be made by dissolving the ganglioside G<sub>Q1b</sub> mixture (ammonium salt) in the solvent of choice, which should be purged with an inert gas. Ganglioside G<sub>Q1b</sub> mixture (ammonium salt) is soluble in a 2:1:0.1 solution of chloroform:methanol:water. We do not recommend storing the aqueous solution for more than one day.

### Description

Ganglioside G<sub>Q1b</sub> is a tetrasialoganglioside that contains two sialic acid residues linked to an inner galactose unit. It stimulates phosphorylation of several ecto-type protein kinase substrates on the surface of GOTO human neuroblastoma cells when used at a concentration of 5 nM.<sup>1</sup> Ganglioside G<sub>Q1b</sub> promotes differentiation of murine embryonic stem cells (mESCs) to neuronal precursor and glial cells *via* activation of the ERK1/2 pathway.<sup>2</sup> It also induces differentiation of murine keratinocytes through phosphoinositide turnover.<sup>3</sup> Ganglioside G<sub>Q1b</sub> mixture contains ganglioside G<sub>Q1b</sub> molecular species with variable fatty acyl chain lengths.

### References

1. Tsuji, S., Yamashita, T., and Nagai, Y. A novel, carbohydrate signal-mediated cell surface protein phosphorylation: Ganglioside G<sub>Q1b</sub> stimulates ecto-protein kinase activity on the cell surface of a human neuroblastoma cell line, GOTO. *J. Biol. Chem.* **104(4)**, 498-503 (1988).
2. Kwak, D.H., Jin, J.W., Ryu, J.S., *et al.* Regulatory roles of ganglioside G<sub>Q1b</sub> in neuronal cell differentiation of mouse embryonic stem cells. *BMB Rep.* **44(12)**, 799-804 (2011).
3. Yada, Y., Okano, Y., and Nozawa, Y. Ganglioside G<sub>Q1b</sub>-induced terminal differentiation in cultured mouse keratinocytes. Phosphoinositide turnover forms the onset signal. *Biochem. J.* **279(Pt 3)**, 665-670 (1991).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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